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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,703	02/28/2002	Hideki Nakata	8861-424US (P27135-01)	4893

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EXAMINER

MCCLOUD, RENATA D

ART UNIT PAPER NUMBER

2837

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,703

Applicant(s)

NAKATA ET AL.

Examiner

Renata McCloud

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 2-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,5 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamai et al (U.S. Patent 6,208,109) in view of Toyosaki et al (JP 2000-262089).

Claim 1: Yamai et al teach an electric motor controller comprising an inverter circuit having switching devices and diodes for converting DC into AC and supplying an AC power to the motor (e.g. Fig. 5:5; 21:121), a motor current detection section for detecting a current flowing through the motor and outputting a detected signal (e.g. Fig. 7:3), and an inverter control section for controlling the inverter circuit on the basis of the output of the motor current detection section (e.g. Fig. 5:8,10; Abstract), wherein the inverter control section comprises: a setting section for outputting a set value (e.g. Fig. 1), a detection section, having a current computing section for computing a current by using the detected signal from the motor current detection section (e.g. Fig. 7:5c), for outputting a detected value representing the driving condition of the motor on the basis of the output of the reactive current computing section (e.g. Fig. 7:5c), and a computing section for controlling the inverter circuit on the basis of the output of the setting section

and the output of the detection section (e.g. Fig. 5:4; Col. 15:45-53). Yamai et al do not teach computing a reactive current. Toyosaki et al teach computing a reactive current (e.g. Pg. 2/5:0012). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Yamai et al to compute a reactive current. The advantage of this would be maximum torque control and reduced noise and vibration.

Claim 23: Yamai et al and Toyosaki et al teach the limitations of claim 1.

Referring to claim 23, Yamai et al teach alternating current sensors (e.g. Fig. 7:3) and teach the detected phase deviations of the alternating current sensors are compensated for (e.g. Col. 30:16-46).

Claim 24: Yamai et al and Toyosaki et al teach the limitations of claim 1.

Referring to claim 24, Yamai et al teach a compressor for use in an air conditioner and a refrigerator (e.g. Col. 23:16-28).

3. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamai et al and Toyosaki et al as applied to claim 1 above, in view of Lorenz et al (U.S. Patent 5,334,923).

Claim 25: Yamai et al and Toyosaki et al teach the limitations of claim 1.

Referring to claim 25, they do not necessarily teach a fan. Lorenz et al teach a fan (Col. 2:38-44).

Claim 26: Yamai et al and Toyosaki et al teach the limitations of claim 1.

Referring to claim 26, it is unclear if they teach a pump. Lorenz et al teach a pump (Col. 2:38-44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Yamai et al and Toyosaki et al to use the motor in a pump and a fan. The advantage of this would be torque and speed control of the pump and the fan.

Allowable Subject Matter

4. Claims 2-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are: Sakai et al (U.S. Patent 5,475,293), Kawabata et al (U.S. Patent 6,191,545), Ohura et al (U.S. Patent 6,534,948), Iwaji et al (U.S. Patent 6,531,843), Garces (U.S. Patent 4,677,360), and Nagai (U.S. Patent 5,486,743).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (703) 308-1763. The examiner can normally be reached on Mon.-Thurs and every other Fri. from 8 am - 5pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Renata McCloud
Examiner
Art Unit 2837

RDM
June 26, 2003



ROBERT E. NAPPI
SUPERVISORY PATENT EXAMINER
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